City of Martinez
525 Henrietta Street, Martinez, CA 94553-2394

February 3, 2014

Bruce H. Wolfe, Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Ms. Pamela Creedon, Executive Officer
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Dear Mr. Wolfe and Ms. Creedon:

Enclosed is the February 2014 Long-Term Trash Load Reduction Plan for the City of Martinez which is required by and in accordance with Provision C.10.c in National Pollutant Discharge Elimination System (NPDES) Permit Number CAS612008 issued by the San Francisco Bay Regional Water Quality Control Board and/or by Provision C.10.c in NPDES Permit Number CA0083313 issued by the Central Valley Regional Water Quality Control Board.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibly of fine and imprisonment for knowing violations.

Very truly yours,

City Engineer,
City of Martinez

Enclosure

City of Martinez

Trash Management Plan

2014-2022

Submitted to the
California Regional Water Quality Control Board for the San Francisco Bay Region

February 1, 2014

in compliance with Provision C.10 of the Municipal Regional Stormwater Permit

Contents

Figures

Tables

Attachment

- Current Street Sweeping Frequency Map.

1. Introduction by the Contra Costa Clean Water Program (CCCWP)

Contra Costa municipalities have prepared Long-Term Trash Reduction Plans (Plans) in compliance with Provision C.10.c. of the Municipal Regional Stormwater Permit[1] (MRP). Each municipal plan describes control measures and best management practices (BMPs) designed to attain a 70% trash load reduction by July 1, 2017 and a 100% reduction by July 1, 2022.

A. Trash Sources, Pathways, and Loadings

Figure 1 illustrates sources and pathways of trash that enters the region's creeks and San Francisco Bay. Trash has multiple sources—all of which are episodic and widely dispersed.

In Figure 1, *Stormwater Conveyances* is highlighted because *only this pathway* is subject to MRP trash-reduction requirements. In reality, the other pathways are equally significant, depending on time and location. In practical terms, the pathways are intertwined. For example, on-land clean-ups reduce trash entering storm drains and also reduce wind-blown trash. When visible trash is reduced, litter and dumping from all sources tends to become less frequent and severe.

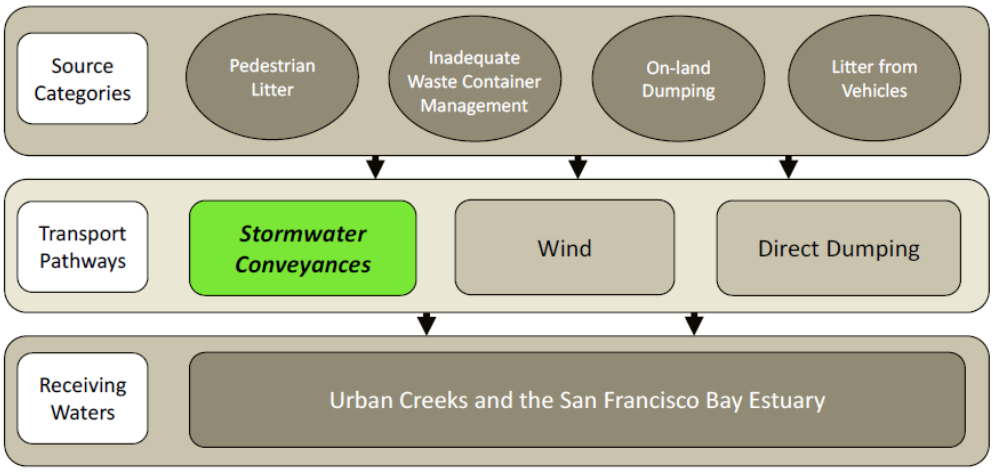

Figure 1. Trash sources and transport pathways.

Municipalities must balance their commitment to MRP compliance with their commitment to preserving and enhancing local environmental quality and quality of life for their residents. That is, municipalities seek to reduce trash on local streets and roads, and to reduce the *total* amount of trash in their creeks and on their shorelines—in addition to fulfilling the Water Board's mandate to eliminate trash that flows through storm drains.

For these reasons, Contra Costa municipalities address trash holistically and comprehensively, integrating a variety of strategies, and uses a variety of methods to assess the success of those strategies.

B. Background for this Plan

MRP Provision C.10 requires the Permittees to reduce trash loads from their storm drains by 40% by 2014, 70% by 2017, and 100% by 2022.

Provision C.10.a.ii. required each Permittee to determine a baseline trash load and a method for tracking reductions in trash loads. Working collectively through the Bay Area Stormwater Management Agencies Association (BASMAA)—and in close collaboration with Water Board staff—the Permittees developed methods, including a calculator, for tracking loads and load reductions.

[1] Order R2-2009-0074, issued by the California Regional Water Quality Control Board for the San Francisco Bay Region, became effective on December 1, 2009 and applies to 76 cities, towns, counties, and flood control districts.

The Permittees used these methods to develop Short-Term Trash Load Reduction Plans by February 1, 2012, and are implementing those plans through July 1, 2014 to achieve the 40% reduction. Progress has been documented in the Permittees' 2012 and 2013 Annual Reports.

Following their review of the Short-Term Plans, Water Board staff requested Permittees to change the methods used to evaluate trash load reductions. Working collectively through BASMAA—and again in close collaboration with Water Board staff—the Permittees developed the framework and planning tools to be used in the Permittees Long-Term Plans.

C. Framework for Long-Term Trash Management

The following 8-step framework was developed[2]:

1. Identify high, medium, and low trash generation areas, based on land use and other geographic data, local knowledge, and field verification.
2. Attempt to identify sources in high and medium trash generation areas to assist in focusing control measures.
3. Prioritize areas and problems/types.
4. Identify options (tools) for dealing with prioritized areas/problems.
5. Define success/goals and measurement type.
6. Select and implement tools.
7. Evaluate success.
8. Modify as needed.

Steps 5 and 7 of this framework acknowledge fundamental challenges presented by Provision C.10—how to define and evaluate success.

D. Identifying High-Trash Areas

To implement the first step of the framework—to identify high, medium, and low trash-generation areas—the Permittees collectively, through BASMAA, developed and calibrated a predictive model of trash generation.[3] Model variables are designated land use and 2010 median household income; the model was calibrated based on trash collected in full-trash-capture devices (BASMAA, 2012a, BASMAA, 2012b).

The Permittees applied the model as follows: The model was used to generate a preliminary map designating very high, high, moderate, and low trash generation areas. Local municipal staff reviewed the preliminary map and identified areas that had incorrect designations based on local knowledge of actual land uses and of trash generation rates (CCCWP, 2013). Specific methods used to verify local trash generation rates are documented in Section 2 below and may include queries of municipal staff or members of the public, reviews of municipal operations data, viewing areas using Google Maps and Street View, application of BASMAA's On-Land Visual Trash Assessment Protocol (BASMAA, 2013), or other methods.

E. Trash Management Strategy

Municipalities delineated Trash Management Areas (TMAs) within their jurisdictions. TMA boundaries are based on land uses, drainage areas, management areas, and/or geographic considerations, and are drawn to facilitate focused and efficient efforts to reduce trash in areas with very high, high, and medium trash generation rates. The rationale for delineating TMAs in the specific municipality, an overview of the municipality's trash management approach, and a description of activities that apply throughout the municipality (including hot spot cleanups, jurisdiction-wide policies, and jurisdiction-wide public outreach) is in Section 3.

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[2] The framework was developed in a November 1, 2012 meeting at Water Board staff offices and was refined in subsequent meetings with Water Board staff.

[3] "Generation" is understood to be the volume of trash potentially available to be transported from the urban watershed (per acre, per year) into the storm drains in the absence of any control measures and BMPs.

Section 4 consists of individual summary plans for each municipal TMA. Each TMA plan describes the key TMA characteristics, summarizes control measures, and describes methods for evaluating effectiveness of efforts with in the TMA.

F. Assessing Effectiveness

Each TMA summary plan includes methods to evaluate effectiveness. As indicated in the framework, the primary purpose of these evaluations is to facilitate continuous improvement of control measures within the TMA. Continuous improvement requires TMA-specific interpretation of results, including consideration of factors that may have contributed to success, or lack of success, at that locale during the evaluation period. Evaluations of effectiveness and adjustments to the TMA summary plans will be included in each annual report.

A secondary purpose of the evaluation methods is to contribute evidence toward an annual general evaluation of progress toward MRP goals. Such an evaluation will be based on weight-of-evidence, using the results from TMA-level evaluations of the effectiveness of specific actions within the TMA, and of the total of TMA-level actions, during the reporting period. A jurisdiction-wide assessment of progress will be compiled by combining this TMA-level evidence with the results of hot spot cleanups, visual assessments of creeks and shorelines, and observations by local residents and cleanup participants. As additional outcome-based assessment methods are devised and pilot tested—regionally and statewide—information derived from these methods will be incorporated into annual progress assessments.

2. City of Martinez Trash Management Overview

A. Characteristics Affecting Trash Generation and Management

Demographic data from the 2010 census is presented in Table 2-1.

Table 2-1. 2010 Census Data

Population	**35,824**
Under 18	**20.5%**
18-24	**7.9%**
25-44	**25.7%**
45-64	**33.8%**
65 and older	**12.1%**
Median household income	**$63,010 (2000) Note: the 2010 median household income is not currently available**

Table 2-2 presents summarizes land uses within the City of Martinez.

Table 2-2. 2005 Land Uses (ABAG)

Land Use Category	Jurisdictional Area	% of Jurisdictional Area
Commercial and Services	**388.3**	**5.6%**
Industrial	**139.1**	**2.0%**
Residential	**3,328.9**	**48.4%**
Retail	**131.8**	**1.9%**
K-12 Schools	**106.7**	**1.6%**
Urban Parks	**259.5**	**3.8%**
Other	**2,520.4**	**36.7%**

The City of Martinez incorporated in 1876, the City covers approximately 8,460 acres in Contra Costa County, and has a jurisdictional area of 6,875 acres. According to the 2010 Census, it has a population of 35,824, with a population density of approximately 2,727 people per square mile, and average household size of 2.42. Of the 35,824 who call the City of Martinez home, 20.5% are under the age of 18, 7.9% are between 18 and 24, 25.7% are between 25 and 44, 33.8% are between 45 and 65, and 12.1% are 65 or older. Top employers in the City of Martinez include Contra Costa County, Shell Oil Company, Kaiser Permanente, Veterans Health Administration, and Martinez Unified School District. The median household income was $63,010(2000). The 2010 median household income is not currently available.

Working collectively with BASMAA and the Contra Costa Clean Water Program (CCCWP), trash generation rate model was developed for the City using the above demographic data and land use information. The trash generation rates where categorized as low, medium, high and very high. City staff reviewed and verified the preliminary trash generation map and identified areas that had incorrect designations as stated in Section 1 and Paragraph 2-C below. Except for few changes to the map, the method used produced satisfactory results. The trash generation map provided an overall picture of the source and location of trash, and is used as a tool in managing trash. Refer to the map for details on the trash generation rates.

The following is a general description land uses and trash generation rates within the City: The downtown core mainly consist of commercial areas (TMA 4) have a medium and high trash generation rate; open space and single family residential areas (south of Highway 4) have low trash generation rate, while higher density residential areas (north of the Highway 4) have a medium and high generation rates; industrial areas (such as the industrial plants and refineries) are regularly maintained have low generation rates; schools and other institutional buildings have a medium generation rate; parks with access roads and parking lots have a medium trash generation rates; and Highway 4 has a high generation rate.

B. Drainage System and Water Resources Affected by Trash

Areas within the City limits drain to three watersheds: Alhambra Creek, Payton Slough, and Grayson Creek. The majority of area within the City limits lies within the Alhambra Creek watershed. Both Alhambra Creek and Peyton Slough drain into Carquinez Strait, San Pablo Bay and then to the Golden Gate.

Rainfall runoff from developed areas is collected by natural channels or underground storm drain system that discharged into creeks at various locations. The residential area located west of Berrellesa Street between Allen Street and Marina Vista has no underground pipe system. Runoff from this area (including upstream open space) is conveyed via streets curb and gutter to inlets on Berrellesa Street before ultimately discharged to Alhambra Creek. There is a detention ponds located on Alhambra Ave on the Forest Hill Creek/Nancy Boyd Creek watershed. It was constructed for flood control purposes.

Alhambra Creek: The majority of the City drains to Alhambra Creek watershed. The Creek watershed covers approximately 16.5 square miles of costal range foothill. The majority of the watershed area is lies in the unincorporated area of Contra Costa County and includes large areas of East Bay Regional Park District , Federal park land and open space.. Alhambra Creek drains through the City of Martinez into Carquinez Strait, San Pablo Bay to the Golden Gate. The drainage basin is oriented on a north–south axis about 5 miles long and 3.5 miles wide. There are three major reaches: Franklin Creek, Alhambra Creek, and the Arroyo Del Hambre. Franklin Creek drains approximately five square miles in the northwest of the basin and in Alhambra Creek in the City of Martinez. Arroyo De Hambre drains approximately seven square miles to the south and west of Vaca Canyon and with Alhambra Creek in Alhambra Valley at the beginning of Wanda Way. There are several other streams and tributaries to the Creek. The Creek within the City is subject to flooding during heavy rainfall storms. The mouth of the Creek is located in a tidal estuary in Carquinez Strait. Tidal action can influence the extent and duration of flooding. Development and human habitation is more dense downstream of the watershed. Residential homes and commercial lots back up close to top of bank. The upper portions of the Creek are wooded/grassy rides and slopes.

Land use in the upper watershed is mainly park and recreation with some residential development. The major segment of the Creek remains a natural channel having several turns and evidence of bank erosion at several locations. The downtown portion of the Creek has been improved to increase its flow capacity. The segment downstream of the railroad bridge consist of a single earth channel that flow through wetland and then into Carquinez Strait. This section of the Martinez shoreline is administered by the East Bay Regional Park District.

Some dumping of trash occurs along the Creek. Volunteers and City staff removes materials from the Creek. Previously removed material from the Creek includes papers, plastics, bottles, car batteries tires, grocery carts, furniture and appliances.

The downstream portion of Payton slough has been recently realigned. Similar to Alhambra, the mouth of the Creek is located in a tidal estuary in Carquinez Strait.

C. Trash Problems and Priorities

As stated in Section 1, working collectively with BASMAA and the Contra Costa Clean Water Program (CCCWP), trash generation rate model was developed using demographic and land use data. Trash generation rates where categories as low, medium, high and very high. City staff reviewed the preliminary trash generation rate map and identified areas that had incorrect designations based on staff knowledge and field verification. Specific protocol was used to evaluate trash generation rates which include queries of municipal staff , reviews of municipal operations data, viewing areas using Google Maps and Street View, application of BASMAA's On-Land Visual Trash Assessment Protocol (BASMAA, 2013). Except for few changes to the map, the method used in developing the trash generation rates produced satisfactory results.

Staff selected representative locations for on-land observations and assessment of trash generation rates. Observations preformed before scheduled trash pickup time. Staff completed an on-land visual assessment form for each location using a procedure prepared by the CCCWP's consultant for this purpose. Pictures were taken to supplement the collected data and the assessment the trash generation rates. The trash generation map will be used as a tool for managing trash. Refer to the map for details on the trash generation rates.

Table 2-3 summarizes trash generation by land use:

Table 2-3. Trash Generation Category by Land Use

Trash Generation Category	Jurisdictional Area (Acres)	Commercial and Services	Industrial	Residential	Retail	K-12 Schools	Urban Parks	Other
Very High	0.5	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
High	92.8	0.0%	0.0%	34.9%	48.2%	16.9%	0.0%	0.0%
Medium	1,777.2	21.8%	7.8%	45.8%	4.9%	5.1%	14.6%	0.0%
Low	5,004.2	0.0%	0.0%	49.6%	0.0%	0.0%	0.0%	50.4%

3. City of Martinez Trash Management Strategy

The following trash management strategy is designed to attain a 70% trash load reduction by July 1, 2017 and a 100% reduction by July 1, 2022. The strategy may be updated and revised in response to changing conditions, including the amounts and location of trash generation, effectiveness of management actions, and available resources. Updates will be documented in Annual Reports.

The City's Trash Management Strategy would include the following, where applicable. It is the City's intension to prioritize and focus on trash reduction for areas having the highest trash generation rates:

A. Enhance the City's policies and ordinances including:

a. A single-use plastic bag carryout ban.
b. A polystyrene food service ware ban.
c. Activities to reduce trash from uncovered load.
d. Anti-littering and illegal dumping enforcement.

B. Public education and outreach programs.
C. Trash pickup from illegal dumping, special events, and hot spots. This work will also be coordinated with the City's trash collector.
D. Improve trash bin/container: Enforce requirements of the City's Municipal code. Bins are not allowed to remain in the streets for more than 24 hours.
E. Street and public parking lots sweeping: Continue current street sweeping activities. Enhanced street sweeping, signage and on-land trash pickup in the downtown commercial area (TMA 4) and portion of TMA 3.1).
F. Install trash receptacles at bus stops throughout the City, and in public facilities and parks where needed.
G. Installing full trash capture devices at strategic locations. The actual location(s) will be selected for maximum efficiency during the design.
H. Maintain the current storm drain inlets cleanup.
I. Maintain current annual creek, channel and coastal shoreline cleanup activities (by City staff and volunteers).
J. Inspect private properties and non-jurisdiction properties within the City limits. Coordinate with owners and other agencies representatives regarding compliance. This includes code enforcement as well as educating property owners and/or business operators on the trash reduction measures.

General description of the City's trash management plan:

1. The City will utilize the trash generation rate map as a guide to prioritize and implement trash reduction methods to attain the MRP goals. Trash management areas (as shown on the map) where indentified based on land use, trash generation and required maintenance activities. Each TMA has been divided into sub-areas for City staff tracking and identification purposes. The TMAs include none-jurisdictional areas such as County, State and Federal properties, schools, highway, and railroads. For the non-jurisdiction areas and areas maintained by other agencies, City crew will contact and coordinate with other agencies' reprehensive(s) regarding trash source cleanup of trash.
2. The City to prioritize the implementation of trash reduction measures in the downtown commercial area (TMA 4); and areas having very high and high trash generation rates such as the residential area in TMA sub areas 1-3 and 3-1 (areas adjacent to the unincorporated area of Contra Costa County (north-east of La Salle Street and sou;th-east of Bush Street) . Listed in Section 4 are method for each TMA (or sub-area) which staff determines to be effective in reducing trash based on current knowledge, field verification, and available data. Selected method(s) may be changed, deleted or updated based on lessons learned, future field observations and assessments of method(s) used.
3. Full trash capture devices: The City has installed 58 full trash capture devices on storm drain, mainly in commercial areas. These inlets are maintained annually and before major storms. The location and type of future full trash capture devices will be selected during the design stage.
4. Street sweeping: As discussed in the City's Short-Term Trash Reduction Plan, public streets and public parking lots are currently swept once a month on a regular basis. Some major streets are swept twice a month. Refer to the attached street sweeping frequency map. These activities will continue. Additionally, the City will post street signs (where required) in the downtown commercial area (TMA 4) to reduce the number of parked cars during street sweeping days in order to allow sweeping to the curb. Sidewalk sweeping and manual pickup

of trash from sidewalk will shortly precede street sweeping. Frequency of street sweeping and trash volumes are tracked.

5. Continue hot spots and shoreline cleanup activates (by staff and/or volunteers).
6. C.3 LID facilities: Constructed facilities in conformance with the CCCWP, C.3 Guidebook are considered full trash capture devices which provide treatment to the tributary drainage areas to those facilities. As of this date, nine (9) bio-retention basins have been constructed throughout the City. They are located at various locations in TMA 1, 2, 3, and 5. The tributary areas treated by these facilities are not currently shown on the attached Full Trash Capture Map. The future submissions of Long-Term Plans as well as this year's Annual Report will include a map of the location of the C.3-LID facilities and the treatment areas. All TMAs may be subject to future development projects and future installation of these facilities.
7. Trash reduction measures are listed for each management area(TMA) in Section 4. Evaluation and assessment such methods are discussed in Section "F" below.

A. Delineation of Trash Management Areas

Tash management areas were indemnified based on staff current knowledge of the City and best approach to achieve compliance with the MRP requirements. It was also based on land use, similarity of current and future maintenance act ivies, geographic location, field observations and assessment of trash issues within the City.

Table 3-1. Trash Generation Category by Trash Management Area

TMA	Jurisdictional Area (Acres)	Trash Generation Category			
		Very High	High	Medium	Low
TMA 1	4,568.7	0.00%	0.24%	1.46%	98.31%
TMA 2	346.3	0.00%	0.03%	78.84%	21.13%
TMA 3	1,027.7	0.04%	2.23%	85.77%	11.96%
TMA 4	34.8	0.00%	36.10%	62.3%	1.70%
TMA 5	396.4	0.00%	7.67%	77.68%	14.65%
TMA 6	167.9	0.00%	0.00%	2.12%	97.88%
TMA 7	330.1	0.00%	4.76%	67.92%	27.31%
TMA 8	3.0	0.00%	5.00%	0.70%	94.30%

Note: Table 3-1 provides a general average for each TMA, which include the sub-areas.

See attached map showing entire TMAs by color for clarity.

See attached Table 3-1A below for breakdown each TMA by sub-areas, percentages and acrage.

Table 3-1 A. Trash Generation Category by Trash Management Area and Sub-Areas

Trash Managemnt Areas Breakdown by Sub-Area percentages

TMAs	Jurisdictional Area (Acres)	Trash Generation Category			
		Very High	High	Medium	Low
TMA- 1	4,568.70				
1.1	40.8	0.00%	0.00%	6.20%	93.80%
1.2	435.5	0.00%	0.00%	4.40%	95.60%
1.3	129.1	0.00%	8.40%	0.90%	90.80%
1.4	9.1	0.00%	0.00%	0.00%	100.00%
1.5	14.5	0.00%	0.00%	0.00%	100.00%
1.6	570.1	0.00%	0.00%	0.60%	99.40%
1.8	3,369.60	0.00%	0.00%	1.20%	98.80%
TMA-2	346.3				
2.1	61.4	0.00%	0.00%	93.70%	6.30%
2.10	8.3	0.00%	0.00%	0.00%	100.00%
2.11	5.4	0.00%	0.00%	100.00%	0.00%
2.12	11.1	0.00%	0.00%	100.00%	0.00%
2.13	14.9	0.00%	0.00%	100.00%	0.00%
2.14	4.2	0.00%	0.00%	99.80%	0.20%
2.15	3	0.00%	0.00%	0.00%	100.00%
2.16	7.3	0.00%	0.00%	100.00%	0.00%
2.17	1	0.00%	0.00%	100.00%	0.00%
2.18	140.2	0.00%	0.00%	98.00%	2.00%
2.19	20.9	0.00%	0.00%	35.80%	64.20%
2.2	10.8	0.00%	0.00%	80.10%	19.90%
2.20	4	0.00%	0.00%	0.00%	100.00%
2.3	2.7	0.00%	3.70%	96.30%	0.00%
2.4	42.7	0.00%	0.00%	16.60%	83.40%
2.5	1.5	0.00%	1.10%	98.90%	0.00%
2.6	1.3	0.00%	0.00%	100.00%	0.00%
2.7	2.3	0.00%	0.00%	100.00%	0.00%
2.9	3.3	0.00%	0.00%	100.00%	0.00%
TMA-3	1027.7				
3.1	369.2	0.10%	6.20%	80.90%	12.80%
3.2	6.8	0.00%	0.00%	92.20%	7.80%
3.3	87.7	0.00%	0.00%	91.10%	8.90%
3.4	392.9	0.00%	0.00%	87.90%	12.10%
3.5	91.7	0.00%	0.00%	84.90%	15.10%
3.6	4	0.00%	0.00%	24.40%	75.60%
3.7	3.2	0.00%	0.00%	100.00%	0.00%
3.8	59.7	0.00%	0.10%	95.00%	4.90%
3.9	12.5	0.00%	0.00%	100.00%	0.00%
TMA-4	34.8	0.00%	36.10%	62.30%	1.70%

Trash Management Areas Breakdown by the Sub-Areas Acreage

TMA	Jurisdictional Area (Acres)	Trash Generation Category			
		Very High	High	Medium	Low
TMA- 1	4,568.70	0.00	10.84	66.71	4491.28
1.1	40.8	0.00	0.00	2.53	38.27
1.2	435.5	0.00	0.00	19.16	416.34
1.3	129.1	0.00	10.84	1.16	117.22
1.4	9.1	0.00	0.00	0.00	9.10
1.5	14.5	0.00	0.00	0.00	14.50
1.6	570.1	0.00	0.00	3.42	566.68
1.8	3369.6	0.00	0.00	40.44	3,329.16
TMA- 1	4,568.70	0.00%	0.24%	1.46%	98.31%
TMA-2	346.30	0.00	0.12	273.02	73.16
2.1	61.4	0.00	0.00	57.53	3.87
2.10	8.3	0.00	0.00	0.00	8.30
2.11	5.4	0.00	0.00	5.40	0.00
2.12	11.1	0.00	0.00	11.10	0.00
2.13	14.9	0.00	0.00	14.90	0.00
2.14	4.2	0.00	0.00	4.19	0.01
2.15	3	0.00	0.00	0.00	3.00
2.16	7.3	0.00	0.00	7.30	0.00
2.17	1	0.00	0.00	1.00	0.00
2.18	140.2	0.00	0.00	137.40	2.80
2.19	20.9	0.00	0.00	7.48	13.42
2.2	10.8	0.00	0.00	8.65	2.15
2.2	4	0.00	0.00	0.00	4.00
2.3	2.7	0.00	0.10	2.60	0.00
2.4	42.7	0.00	0.00	7.09	35.61
2.5	1.5	0.00	0.02	1.48	0.00
2.6	1.3	0.00	0.00	1.30	0.00
2.7	2.3	0.00	0.00	2.30	0.00
2.9	3.3	0.00	0.00	3.30	0.00
TMA-2	346.30	0.00%	0.03%	78.84%	21.13%
TMA-3	1,027.70	0.37	22.95	881.45	122.93
3.1	369.2	0.37	22.89	298.68	47.26
3.2	6.8	0.00	0.00	6.27	0.53
3.3	87.7	0.00	0.00	79.89	7.81
3.4	392.9	0.00	0.00	345.36	47.54
3.5	91.7	0.00	0.00	77.85	13.85
3.6	4	0.00	0.00	0.98	3.02
3.7	3.2	0.00	0.00	3.20	0.00
3.8	59.7	0.00	0.06	56.72	2.93
3.9	12.5	0.00	0.00	12.50	0.00
TMA-3	1,027.70	0.04%	2.23%	85.77%	11.96%
TMA-4	34.8	0.00	12.56	21.68	0.59
TMA-4	34.8	0.00%	36.10%	62.30%	1.70%

Table 3-1 A (continues) . Trash Generation Category by Trash Management Area and Sub-Areas

Trash Managemnt Areas Breakdown by Sub-Area percentages

TMA-5	396.4				
5.1	6.8	0.00%	0.00%	72.00%	28.00%
5.10	4.4	0.00%	0.00%	100.00%	0.00%
5.11	3.3	0.00%	98.80%	1.20%	0.00%
5.12	11.6	0.00%	0.00%	100.00%	0.00%
5.13	8.5	0.00%	0.00%	100.00%	0.00%
5.14	35	0.00%	0.00%	85.70%	14.30%
5.15	25.1	0.00%	0.00%	93.00%	7.00%
5.16	7.8	0.00%	0.00%	100.00%	0.00%
5.17	10.1	0.00%	100.00%	0.00%	0.00%
5.18	5.6	0.00%	100.00%	0.00%	0.00%
5.19	8.7	0.00%	0.00%	100.00%	0.00%
5.2	5.4	0.00%	0.00%	100.00%	0.00%
5.20	3.3	0.00%	100.00%	0.00%	0.00%
5.21	2.1	0.00%	0.00%	100.00%	0.00%
5.22	4	0.00%	0.00%	100.00%	0.00%
5.23	40.5	0.00%	0.00%	49.10%	50.90%
5.24	33.5	0.00%	0.00%	27.20%	72.80%
5.25	2.6	0.00%	0.00%	100.00%	0.00%
5.26	19.9	0.00%	0.00%	100.00%	0.00%
5.3	47.1	0.00%	0.50%	98.70%	0.80%
5.4	7	0.00%	0.00%	100.00%	0.00%
5.5	3	0.00%	77.90%	22.10%	0.00%
5.6	15.4	0.00%	0.00%	100.00%	0.00%
5.7	51.6	0.00%	10.80%	87.20%	2.00%
5.8	30.5	0.00%	0.00%	90.20%	9.80%
5.9	3.6	0.00%	0.00%	100.00%	0.00%

TMA-6	167.9				
6.1	28.3	0.00%	0.00%	0.00%	100.00%
6.2	5.1	0.00%	0.00%	69.70%	30.30%
6.3	39	0.00%	0.00%	0.00%	100.00%
6.4	95.5	0.00%	0.00%	0.00%	100.00%

TMA-7	330.1				
7.1	38.3	0.00%	0.00%	47.90%	52.10%
7.10	10.6	0.00%	0.00%	100.00%	0.00%
7.11	26.4	0.00%	0.00%	100.00%	0.00%
7.12	4.8	0.00%	0.00%	74.50%	25.50%
7.13	39.4	0.00%	0.00%	2.80%	97.20%
7.14	7.5	0.00%	0.00%	100.00%	0.00%
7.15	4.1	0.00%	0.00%	53.00%	47.00%
7.16	46.2	0.00%	0.00%	100.00%	0.00%
7.17	8.7	0.00%	0.00%	0.00%	100.00%
7.2	27.2	0.00%	0.00%	52.30%	47.70%
7.3	10.7	0.00%	0.00%	100.00%	0.00%
7.4	9.5	0.00%	0.10%	99.90%	0.00%
7.5	21.5	0.00%	0.00%	100.00%	0.00%
7.6	48.3	0.00%	32.50%	56.30%	11.10%
7.7	7.5	0.00%	0.00%	100.00%	0.00%
7.8	11.5	0.00%	0.00%	100.00%	0.00%
7.9	7.9	0.00%	0.00%	78.50%	21.50%

TMA-8	3	0.00%	5.00%	0.70%	94.30%

Trash Management Areas Breakdown by the Sub-Areas Acreage

TMA-5	396.40	0.00	30.41	307.93	58.07
5.1	6.8	0.00	0.00	4.90	1.90
5.10	4.4	0.00	0.00	4.40	0.00
5.11	3.3	0.00	3.26	0.04	0.00
5.12	11.6	0.00	0.00	11.60	0.00
5.13	8.5	0.00	0.00	8.50	0.00
5.14	35	0.00	0.00	30.00	5.01
5.15	25.1	0.00	0.00	23.34	1.76
5.16	7.8	0.00	0.00	7.80	0.00
5.17	10.1	0.00	10.10	0.00	0.00
5.18	5.6	0.00	5.60	0.00	0.00
5.19	8.7	0.00	0.00	8.70	0.00
5.2	5.4	0.00	0.00	5.40	0.00
5.20	3.3	0.00	3.30	0.00	0.00
5.21	2.1	0.00	0.00	2.10	0.00
5.22	4	0.00	0.00	4.00	0.00
5.23	40.5	0.00	0.00	19.89	20.61
5.24	33.5	0.00	0.00	9.11	24.39
5.25	2.6	0.00	0.00	2.60	0.00
5.26	19.9	0.00	0.00	19.90	0.00
5.3	47.1	0.00	0.24	46.45	0.38
5.4	7	0.00	0.00	7.00	0.00
5.5	3	0.00	2.34	0.66	0.00
5.6	15.4	0.00	0.00	15.40	0.00
5.7	51.6	0.00	5.57	45.00	1.03
5.8	30.5	0.00	0.00	27.51	2.99
5.9	3.6	0.00	0.00	3.60	0.00
TMA-5	396.40	0.00%	7.67%	77.68%	14.65%

TMA-6	167.90	0.00	0.00	3.55	164.35
6.1	28.3	0.00	0.00	0.00	28.30
6.2	5.1	0.00	0.00	3.55	1.55
6.3	39	0.00	0.00	0.00	39.00
6.4	95.5	0.00	0.00	0.00	95.50
TMA-6	167.90	0.00%	0.00%	2.12%	97.88%

TMA-7	330.10	0.00	15.71	224.21	90.14
7.1	38.3	0.00	0.00	18.35	19.95
7.10	10.6	0.00	0.00	10.60	0.00
7.11	26.4	0.00	0.00	26.40	0.00
7.12	4.8	0.00	0.00	3.58	1.22
7.13	39.4	0.00	0.00	1.10	38.30
7.14	7.5	0.00	0.00	7.50	0.00
7.15	4.1	0.00	0.00	2.17	1.93
7.16	46.2	0.00	0.00	46.20	0.00
7.17	8.7	0.00	0.00	0.00	8.70
7.2	27.2	0.00	0.00	14.23	12.97
7.3	10.7	0.00	0.00	10.70	0.00
7.4	9.5	0.00	0.01	9.49	0.00
7.5	21.5	0.00	0.00	21.50	0.00
7.6	48.3	0.00	15.70	27.19	5.36
7.7	7.5	0.00	0.00	7.50	0.00
7.8	11.5	0.00	0.00	11.50	0.00
7.9	7.9	0.00	0.00	6.20	1.70
TMA-7	330.10	0.00%	4.76%	67.92%	27.31%

TMA-8	3	0.00	0.15	0.02	2.83
TMA-8	3.00	0.00%	5.00%	0.70%	94.30%

B. Area-Specific Control Measures, Implementation Schedules, and Effectiveness Assessment

Long-Term Trash Reduction Plans for each Trash Management Area, including control measures, detailed implementation plans, and methods of assessing the effectiveness of control measures are in Section 4.

C. Creek and Shoreline Cleanups

Table 3-2. Creek and Shoreline Cleanups

Location	Description	Cleanup Frequency			
		Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Location 1	Shoreline and creek clean-up. This includes cleanup of Alhambra Creek from Carquinez Strait south to Highway 4	X	X	X	X
Location 2	Hot spot cleanup. Located on Alhambra Creek between Escobar Street and Green Street (located in TMA 4).	X	X	X	X

Location Number 2 is the City's hot spot as mandated under the current MRP. Trash amount from this location will be tracked and documented. This location will be used to assess the City's overall City reduction measures.

D. Trash Reduction Policies

The following briefly describe existing ordinances and enhancements; and the status its implementation. Evaluation of effectiveness is discussed in Section "F" below:

1. Solid Waste Ordinance.

The City's current Solid Waster Ordinance (Title 8, Chapter 8.16) prohibits the through, burry, deposit, or cause to be thrown or deposited any refuse or any collection of the same to remain in the public right of way, watercourses or waterways, or upon any premises whatsoever other than approved disposal area or collection stations or authorizes solid waste containers or approved recycling containers. The Ordinance includes rules and regulations for the administration of solid waste, handling and enforcement of this Ordinance. The Ordinance is enforced by the City's code enforcement officer. A copy of the Ordinance is available at the City of Martinez Website.

Although the California Vehicle Code (CVC Sections 23114 and 23115) states that its against the law to operate a vehicle on the highway which is improperly covered , constructed or loaded so that any part of its content or load spills, drop, leak or blow or otherwise escape from the vehicle, the City is planning to enhance its Municipal Code to include a section in the Municipal Code requiring all vehicles transporting refuse within the City to be completely covered to prevent spilling and blowing from vehicles when in routes through City street to a disposal site, including code enforcement procedure .

2. Stormwater Management and Discharge Ordinance.

On April 3, 2013, the City adopted a new Stormwater Management Ordinance (Title 15, Chapter 15.06) to enhance the water quality in the City of Martinez watercourse. This Ordinance is based on the recent model ordinance provided by the Contra Costa Clean Water Program (CCCWP). It contains regulations regarding controlling the discharge to the City's stormwater system from dumping or disposal of material other than stormwater. The Ordinance is enforced by the City's code enforcement officer. A copy of the Ordinance is available at the City of Martinez Website.

Development project: For future large development project requiring discretionary approvals, the City will consider including ,as a condition of approval, trash reduction measures. Conditions may include regularly cleaning of private storm drain inlets, removing trash form bio-retention basins, sweeping

parking lots and/or installing full trash capture devices. Bio-retention basins (where required) will be inspected for trash as a part of the annual inspection..

3. Single-use Carryout Plastic Bag ban Ordinance:

The City is proposing to proceed with a single-use plastic bag ban ordinance that would prohibits retail establishments within the City limits form providing such plastic bags to customers, unless otherwise the State has adopted a similar state-wide law. The proposed City ordinance will utilize the model ordinance developed by the Contra Costa Clean Water Program (CCCWP). It is anticipated that this ordinance will be in effect by July 2014. In general this ordinance would require recyclable paper or reusable bags be made available to customers at minimum charge of 10 cents per bag for the first year, 15 cents per bag for the second year and 25 cents per bag for the third year and beyond.

Requirements, enforcement and effectiveness: Retail Establishments would be required to report to the City Manager (or his/her designee), on an annual basis, the total number of recycled paper carryout bags provided, the total amount of monies collected for providing recycled paper carryout bags, and a summary of any efforts a retail establishment has undertaken to promote the use of reusable bags by customers in the prior year. Such reporting would be done on a form prescribed by the City Manager (or other designee), and must be signed by a responsible agent or officer of the retail establishment confirming that the information provided on the form is accurate and complete. All reporting would be submitted no later than 45 days after the end of each calendar year. If the reporting required is not timely submitted by a retail establishment, such retail establishment would be subject to the fines set forth in the enforcement section of the ordinance.

City staff would be trained to observe, quantify and document type of trash collected. Staff would evaluate the data provided by retail establishment vs. the percentages of plastic bags observed in collected trash from selected locations, hotspots, trash capture devices. Progress on effectiveness is discussed in Section "F" below.

4. Polystyrene Foam Food Service Ware Ordinance:

The City is proposing a regulation ordinance that would prohibit the use of polystyrene foam food service ware within the City limits, unless otherwise the State has adopted a similar State-wide law. It is anticipated that these regulation will be in effect by July 2014.

In general, food providers using disposable food ware for prepared food to customers would be required to use bio-degradable or combustible food ware. Food providers are strongly encouraged to use reusable food ware in place of disposable food ware, where practical.

Enforcement and effectiveness: The City Manager (or his/her designee) would have primary responsibility to enforce this ordinance. City staff would be trained to observe, quantify and document trash collected. Staff would evaluate the percentages of polystyrene food ware collected in trash from specified locations, hotspots, trash capture devices. Progress and effectiveness is discussed in Section "F" below.

E. Public Education, Outreach, and Community Involvement

Through the CCCWP, the Permittees conducted a "Litter Travels, But It Can Stop with You" multi-year campaign beginning in FY 2009-2010. The multi-media campaign was designed to educate Contra Costa's citizens about the impacts of trash and litter in the County's waterways and how they can help address this problem and included TV spots, billboards, posters at BART stations, placards on transit buses, print ads and updates to the CCCWP website. Other outreach included more than 10,000 letters to County residents, contact with youth sports leagues, outreach to the 17 school districts in the County, and distribution of flyers to students in 5 of those districts. Pre and post-campaign surveys were conducted.

Through the CCCWP, Permittees also support the work of the California Product Stewardship Council (CPSC) and the Green Business Program. Both of these organizations address trash through source reduction and waste management. CPSC's mission is to promote Extended Producer Responsibility (EPR), which is based upon shifting California's product waste management system from one focused on government funded and ratepayer financed waste diversion to one that relies on producer responsibility in

order to reduce public costs and drive improvements in product design that promote environmental sustainability. The CPSC's position is that the producers should have the primary responsibility to establish, fund, and manage end of life systems for their products. CPSC has advocated for EPR legislation affecting a wide-range of products including pharmaceuticals, batteries, paint, sharps, and mattresses.

The Green Business Program, of which CCCWP is the largest contributing Partner in Contra Costa County, is designed to publicly recognize private businesses and public agencies that take extra steps, beyond baseline compliance with environmental regulations, to prevent pollution and save resources (e.g., conserve water and energy, reduce waste through reuse and recycling, prevent stormwater pollution through good housekeeping practices, etc.). To date, 530 businesses have been certified as Green Businesses in Contra Costa County. Currently, 334 businesses are certified including a large number of auto repair shops, landscapers, waste haulers, printers, grocery and hardware stores, solar panel installers, and home remodelers. Numerous public agencies have also been certified. Municipal stormwater and POTW inspectors assist the Green Business program by encouraging potential Green Business candidates. CCCWP staff serves on the Green Business Program's "Partners Committee" and actively engages in development of the Green Business checklist (i.e., the stormwater pollution prevention section that each business needs to complete before becoming certified as a green business). Some of the more relevant actions that businesses have undertaken to become certified or recertified that also reduce trash loads include the following: commit to reduce waste in a minimum of five ways, maintain parking areas free of litter, keep dumpsters covered when not in use, ensure tarps for covering loads are in good condition and used correctly, and purchase a minimum of three recycled-content products.

To address trash from illegal dumping, the CCCWP operates a 1-800-No-Dumping hotline. The hotline is used by both businesses and the public to report potentially illegal dumping activities. All hotline calls are referred to the appropriate municipality for follow-up and, if necessary, enforcement. Calls have been logged since FY 2004-2005. Calls to the hotline are combined with calls that come directly to municipalities and Contra Costa County Hazardous Materials (Hazmat) Division and are tracked and documented annually in the municipal annual reports.

The CCCWP will continue to identify new partners and areas of outreach for source reduction and measures to reduce trash in the environment. CCCWP is currently in contact with California Department of Transportation (Office of Stormwater Program Development) and hopes to identify trash load reduction projects in Contras Costa County that would be financially and strategically feasible for all involved parties. CCCWP has also made contact with the California Highway Patrol, Contra Costa County Solid Waste Authority, and a number of transfer stations to potentially develop additional outreach materials to reduce litter from uncovered loads.

The City’s outreach campaign would include mailing, with the water bills, literature and information on trash management to residences and commercial properties. This campaign will cover properties within the City limits, as well as properties in the unincorporated areas in Contra Costa County which receive potable water from the City of Martinez water system.

Anti-lettering information and guidance will be provided to schools, sport leagues, coaches and special events coordinator.

F. Jurisdiction-wide Progress Assessment and Continuous Improvement

City maintenance staff will track progress by visual inspections, photos, data collection and assessment of trash reduction methods used as follows. The City’s hot spot will be used as a measure to assess the City’s overall trash reduction progress.

1. Cumulative effect of implementing several city-wide trash reduction measures may impact the trash generation rate for certain areas. City maintenance staff may use a protocol similar to the one used in determining the trash generation rates map to re-evaluate the conditions and the implementation the trash reduction methods. Such method(s) may be used, in areas receiving

enhanced sweeping activities, on-land pickup and signage. It will not be used in areas receiving structural full trash capture devices.

2. Areas receiving full trash capture devices:

   Track the frequency of clean outs & volume collected; capacity at cleaning, percent of debris in inlets.

3. Enhanced street sweeping areas:
   Track ability of sweeping to the curb and speed of sweeper. Visually assess before and after conditions.

4. On-land clean ups:

   Track location, frequency, and volume of clean-ups. Survey level of participation, and/or solicit feedback from volunteers on overall condition of site. Track volunteer hours.

5. Activities to reduce trash from uncovered Loads:

   Track number of violations, visual assessments on areas after cleanup.

6. Anti-littering and illegal dumping enforcement:

   Track number of code enforcement cases, cleanup events by the City trash collector company. Continue to investigate source, and educate violators.

7. Improved trash bins/container management

   Monitor capacity of bins (mostly empty, half-full, full, overflowing) at pick-up.

   Where necessary, educate owners and business operators on the need to control trash overflow from bins and dumpsters and cleanup or sweeping of private parking lots.

8. Plastic bags ban and polystyrene food serve wares ban ordinances:

   Track compliance of stores and required reporting by owners.

   Track volume of product in creek and on-land cleanups, etc.

8. Public outreach campaigns and education:

   Conduct pre and post –surveys of campaign and actions taken as part of campaign;

9. Business improvement:

   Report on actions (complaints responded to, enforcement, number of clean-ups, etc.).

   Track improvements made by business to comply with trash reduction.

4. Trash Management Area Plans

A. TMA-Specific Plans (refer to attached City of Martinez Trash Management Area Map for location):

Note: All trash Management areas (TMA 1 through 8) will have the following Control measures. These Control measures are Jurisdiction-wide and apply to all Trash Management Areas. They are not listed on each Individual TMA. The effectiveness and assessment of these control measures are discussed in Section 3-F above.

5. References

BASMAA 2012a. Bay Area Stormwater Management Agencies Association. Trash Generation Rates for San Francisco Bay Area MS4s (Draft Final). Presentation to the BASMAA Trash Committee, August 2012. Prepared by EOA, Inc.

BASMAA 2012b. Baseline Trash Generation Rates, Preliminary Calibration of Modeled Results, Presentation to BASMAA Trash Committee, September, 2012. Prepared by EOA, Inc.

BASMAA 2013a. Visual On-Land Trash Assessment Protocol for Stormwater, Version 1.0 (Draft). April 30, 2013. Prepared by EOA, Inc.

CCCWP, 2013. Contra Costa Clean Water Program. Long-Term Trash Load Reduction Plan Development—Trash Generation Map Refinements. Technical Memorandum, May 20, 2013. Prepared by EOA, Inc.

TRASH MANAGEMENT AREA

Common Trash Control measures for TMA1 thru TMA 8

The following common trash control measures to all the trash management areas within the City limits. It should be considered as included in each TAM. For clarity, these measures are not listed in the summary of control measures for each TMA .

Key Characteristics of Trash Management Area [1 To 8]

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
4568	0	1.2	25.6	72.6	Residential	General trash

Approximately 73 percent of the City is considered as having low trash generation rate.

Refer to Section 3-F for assessment of trash management methods.

Summary of Control Measures and Implementation Schedule for Trash Management Area [1-1 To 1-8]

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Anti-Littering and illegal dumping; Activities to reduce trash from uncovered load and code enforcement	See description in Section 3-D for details	X	X	X	X
Plastic bags ban and Polystyrene food serve ware ban.	See Section 3-D for details		X	X	X
Trash Bin Management	See Section 3-D for details	X	X	X	X
Storm drain inlet maintenance	Maintain current storm drain inlet cleanup. All publicly owned inlets are inspected and cleaned annually. Publicly maintained Inlets are tagged with No Dumping tags	X	X	X	X
Street sweeping	Maintain current street sweeping activities. See attached map.	X	X	X	X
Public Education and outreach	Coordinate with schools and other agencies . Refer to Section for additional information. Refer to Section 3-E	X	X	X	X

City of Martinez Long-Term Trash Reduction Plan

TAM 1: Sub-areas 1-1 to 1-8 are low trash generation areas that will receive the same trash management measures

Key Characteristics of Trash Management Area [1-1 To 1-8]						
Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
4568	0	1	2.7	96.9	Commercial and Residential	Pedestrian-generated litter]

Approximately 97% is residential in area. No additional trash reduction measures. Applicable common trash reduction measures as stated above should contribute

Summary of Control Measures and Implementation Schedule for Trash Management Area [1-1 To 1-8]					
Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
City-Wide Trash Reduction measures	Refer to above sheet for details of common trash reduction measures.				
Full Trash Capture Devices	full trash capture devices will only be considered for the high trash generates rate area in TMA 1-3. No full trash capture devises is proposed for the rest of the sub-areas Devices are maintained annually and inspected before large storms.			X	
Install Trash Receptacles at Bus Stops	Install trash receptacles at bus stops where deemed by staff to be effective in collecting trash .		x	x	x
Maintain current level of trash reduction	This includes the common measures stated above and any addition future City-wide trash control measures	X	X	X	X

TRASH MANAGEMENT AREA

2

(subarea 2.1)

This Sub-area 2-1 includes various sports fields and picnic areas with heavy usage. This area is also used several times per year for large special events.

Key Characteristics of Trash Management Area 2.1

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
61.4	0	0	93.7	6.3	Public recreation	[Pedestrian-generated litter]

Long term reduction goals will be accomplished thru monitoring and enforcement of all control measures listed, On land trash cleanups, improved trash bin/container management, creek cleanups and improved volunteer work groups.

Summary of Control Measures and Implementation Schedule for Trash Management Area 2.1

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
City-Wide Trash Reduction Measures	Refer to above sheet for details of common trash reduction measures.				
On-land Trash Cleanups	Pick up trash by City staff and/or Volunteers. Track location, frequency, and volume of clean ups. Survey level of participation, and or solicit feedback from volunteers on overall condition of sites. Track volunteer hours		X	X	X
Improved Trash Bins/Container Management	Monitor capacity mostly empty, half-full, full, overflowing of bins at pick- up		X	X	X
Creek, Channel, Shoreline Cleanups	Track removal in hot spots and other know locations for dumping, monitor volunteer groups during yearly clean-ups by tracking trash removed and locate sources when possible	X	X	X	X
Full Trash Capture Devices	Add full trash capture devices in strategic areas as required. Prioritize high trash generation area in TMA 3-1 Devices are maintained annually and inspected before large storms.		X		x

TRASH MANAGEMENT AREA

City of Martinez Long-Term Trash Reduction Plan

2

(2.4 to 2.20)

TMA 2: This include the remaining areas of TMA (Sub-area 2-4 to 2-20) have been combined as parks and green areas that are maintained and receive similar trash control measures by City Staff.

Key Characteristics of Trash Management Area 2.4 to 2.20

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
245	10	65	25	0	Commercial and Residential	Pedestrian-generated litter

9 areas listed as TMA's are Public parks with picnic facilities as well as sports fields. The remaining green locations are maintained by city parks staff but do not have a significant trash load that requires modification to the existing maintenance program

Summary of Control Measures and Implementation Schedule for Trash Management Area 2.4-2.20

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
City-Wide Trash Reduction Measures	Refer to above sheet for details of common trash reduction measures.				
Full Trash Capture Devices	Add full trash capture devices in strategic areas as required. Devices are maintained annually and inspected before large storms.		X		x
Install Trash Receptacles at Bus Stops	Install trash receptacles at bus stops where deemed by staff to be effective in collecting trash.		x	x	x
On-land Trash Cleanups	High trash load generation areas during peak picnic and sports seasons will require additional trash pick up from 2 to 3 times per week	X	X	X	X
Improved Trash Bins/Container Management	All renovated parks within the City will have additional trash and recycle containers along with updated signage.		X	X	X

Evaluation of Program Effectiveness for Trash Management Area 2.4-2.20

Control Measure	Evaluation Method	Evaluation Method Details

TRASH MANAGEMENT AREA

City of Martinez Long-Term Trash Reduction Plan

3

(3.1 to 3.9)

TMA# 3 (3.1 to 3.9) is combined as Medium Trash Generation areas

Key Characteristics of Trash Management Area 3.1 to 4.0

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
1027	.1	.1	82	17	Residential	[Pedestrian-generated litter]

Summary of Control Measures and Implementation Schedule for Trash Management Area 3.1-3.9

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
City-Wide Trash Reduction Measures	Refer to above sheet for details of common trash reduction measures.				
Street Sweeping and signage enhancement	Current sweeping adequate add addition signage in residential areas to increase ability to sweep to the curb. Visually inspect before and after conditions	X	X	X	X
Install Trash Receptacles at Bus Stops	Install trash receptacles at bus stops where deemed by staff to be effective in collecting trash.		x	x	x
Continue Storm Drain Inlet Maintenance	Inlets are inspected annually. Inlets with trash capture devices are also inspected before major storms. Inpect inlets for no dumping tags.		X	X	X
Full Trash Capture Devices	Add full trash capture devices in strategic areas as required. Prioritize high trash generation area in TMA 3-1 Devices are maintained annually and inspected before large storms.		X	X	x

Evaluation of Program Effectiveness for Trash Management Area 3.1 to 3.9

Control Measure	Evaluation Method	Evaluation Method Details
Full Trash Capture devices	Document Maintenance	Track amount of trash removed
Street Sweeping	**Dailey Documentation**	**Visual inspections combined with trash level amounts and curb mile records**

City of Martinez Long-Term Trash Reduction Plan

4.0

TMA 4.0 has been designated as the Downtown business and retail core (Downtown Core)

Key Characteristics of Trash Management Area 4.0

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
34.8	0	36.1	62.3	1.7	Business & commercial	Pedestrian generated, fast food, commercial waste containment

The long term trash management reduction will be reached thru monitoring the effectiveness of programs developed

Summary of Control Measures and Implementation Schedule for Trash Management Area 4.0

Control Measure	Control Measure Details	Pre- MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
City-Wide Trash Reduction Measures	Refer to above sheet for details of common trash reduction measures.				
Street sweeping	Increase sweeping twice a week, Blow off sidewalks and pockets ahead of street sweeping to increase litter pick up		X	X	X
Install Trash Receptacles at Bus Stops	Install trash receptacles at bus stops where deemed by staff to be effective in collecting trash.		x	x	x
Community outreach/education	Communication thru downtown organizations to educate business owner on proper trash management		X	X	X
Plastic Bag Ban	Visual inspection after Ban is adopted into city ordinance for compliance and effectiveness of removing the source (plastic Bags)		X	X	X
trash bins and containment	Monitor capacities thru visual inspection of garbage containers in the core area. Full half full over flowing ETC. increase pick up as needed		X	X	X
Full Trash Capture Devices	Add full trash capture devices in strategic areas as required. Devices are maintained annually and inspected before large storms.		X		x

Evaluation of Program Effectiveness for Trash Management Area 4.0		
Control Measure	**Evaluation Method**	**Evaluation method details**
All control measures listed in summary section above	Documentation, Visual with photo documentation Public enrollment	Documentation of trash amounts collected , effectiveness of programs, Enforcement numbers, Visual inspections, monitor container capacities, Continue knowledge threw education with public and commercial property owners as well as small business owners
Install Trash Receptacles at Bus Stops	**Visual inspection and documentation**	**Document volume, condition of containers and visual inspecting of the bus stop area.**

TRASH MANAGEMENT AREA

5

(5.1 to 5.26)

City of Martinez Long-Term Trash Reduction Plan

Sub areas 5.1 thru 5.26 have been combined as Commercial industrial sites including shopping centers commercial and industrial businesses, schools

Key Characteristics of Trash Management Area 5.1-5.26

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
396	0	18.75	75	6.75	commercial	Pedestrian generated, fast food, commercial waste containment

Summary of Control Measures and Implementation Schedule for Trash Management Area 5.1-5.26

Control Measure	Control Measure Details	Pre- MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
City-Wide Trash Reduction Measures	Refer to above sheet for details of common trash reduction measures.				
Observation, of trash containers on private and commercial properties	Monitor capacities thru visual inspection of garbage containers in commercial areas. Full half full over flowing ETC.			X	x
Property management cooperation involving trash management and containment.	Develop a education and communication with property managers to insure their buy in and compliance with trash reduction methods and principals			X	X
Full Trash Capture Devices	Add full trash capture devices in strategic areas as required. Prioritize high trash generation area in TMA 3-1 Devices are maintained annually and inspected before large storms.		X		x
Install Trash Receptacles at Bus Stops	Install trash receptacles at bus stops where deemed by staff to be effective in collecting trash.		x	x	x

Evaluation of Program Effectiveness for Trash Management Area 5.1 to 5.26		
Control Measure	**Evaluation Method**	**Evaluation method details**
All control measures listed in summary section above	Documentation, Visual with photo documentation Public enrollment	Monitor , effectiveness of programs, Enforcement numbers, Visual inspections, monitor container capacities, Continue knowledge threw education with public and commercial property owners as well as small business owners
Install Trash Receptacles at Bus Stops	**Visual inspection & documentation**	**Document volume, condition of containers and visual inspecting of the bus stops area.**

City of Martinez Long-Term Trash Reduction Plan

6

(6.1 to 6.4)

TMA #6 (Sub-area 6.1 thru 6.4) refineries and major industrial sites locations north and south of marina vista and highway 680

Key Characteristics of Trash Management Area 6.1 to 6.4

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
167	0	0	17.5	82.5	Refinery and industrial sites	Pedestrian generated, litter

These jurisdictions have their own NPDES permits. Very minimum onsite trash is generated. Based on field observation, it is determined to be low trash generation areas (green). No specific measures are required,.

Summary of Control Measures and Implementation Schedule for Trash Management Area 6.1 to 6.4

Control Measure	Control Measure Details	Pre- MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
City-Wide Trash Reduction Measures	Refer to above sheet for details of common trash reduction measures.				
Observation, of trash containers on private and commercial properties	Monitor capacities thru visual inspection of garbage containers in commercial areas. Full half full over flowing ETC. Coordinate and educate property owner on trash compliance. Code enforcement of violators.		x	x	x

Evaluation of Program Effectiveness for Trash Management Area 6.1 to 6.4

Control Measure	Evaluation Method	Evaluation method details
All control measures listed in summary section above	Documentation, Visual with photo documentation	Documentation of trash amounts collected, effectiveness of programs, Enforcement numbers. See Section 3-F for details of evaluation and assessments.

All control measures listed in summary section above	Documentation, Visual with photo documentation	Documentation of trash amounts collected , effectiveness of programs, Enforcement numbers,
Install Trash Receptacles at Bus Stops	Visual inspection & documentation	Document volume, condition of containers and visual inspecting of the bus stop area.

TRASH MANAGEMENT AREA

City of Martinez Long-Term Trash Reduction Plan

7

(7.1 to 7.17)

TMA 7 (Subarea 7.1 thru 7.17) are made up of other agencies jurisdictions

Key Characteristics of Trash Management Area 7.1 to 7.17

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
330	0	1.9	74.4	23.6	County business, court houses, sport centers, EBRPD, State parks	Pedestrian generated, trash

Visual inspections and communication with outside agencies when needed as required to comply with TMA reductions.

Summary of Control Measures and Implementation Schedule for Trash Management Area 7.1 to 7.17

Control Measure	Control Measure Details	Pre- MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
City-Wide Trash Reduction Measures	Refer to above sheet for details of common trash reduction measures.				
Anti littering and illegal dumping	Track number of enforcement cases. Report on actions taken to decrease illegal dumping, school & community engagement, Visual inspections.		X	X	X
Plastic Bag Ban	Visual inspection after Ban is adopted into city ordinance for compliance and effectiveness of removing the source (plastic Bags)		X	X	X
Improved trash bins and containment	Monitor capacities thru visual inspection of garbage containers in commercial areas. Full half full over flowing ETC.				
Install Trash Receptacles at Bus Stops	Install trash receptacles at bus stops where deemed by staff to be effective in collecting trash.		x	x	x
Property management cooperation involving trash management and containment.	Develop a education and communication with property managers to insure their buy in and compliance with trash reduction methods and principals		X	X	X

Evaluation of Program Effectiveness for Trash Management Area 7.1 to 7.17		
Control Measure	**Evaluation Method**	**Evaluation method details**
All control measures listed in summary section above	Documentation, Visual with photo documentation Public enrollment	Visual inspections, monitor container capacities, Continue knowledge threw education with public and commercial property owners as well as small business owners
Install Trash Receptacles at Bus Stop	**Visual inspection & documentation**	**Document volume, condition of containers and visual inspecting of the bus stops area.**

City of Martinez Long-Term Trash Reduction Plan

TMA 8 (Subarea 8.1 thru 8.3) transportation corridors by other agencies (Caltrans and railroad)

Key Characteristics of Trash Management Area 8.1-8.3

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
3	0	5	0.7	94.3	Transportation corridors	Vehicles generated trash

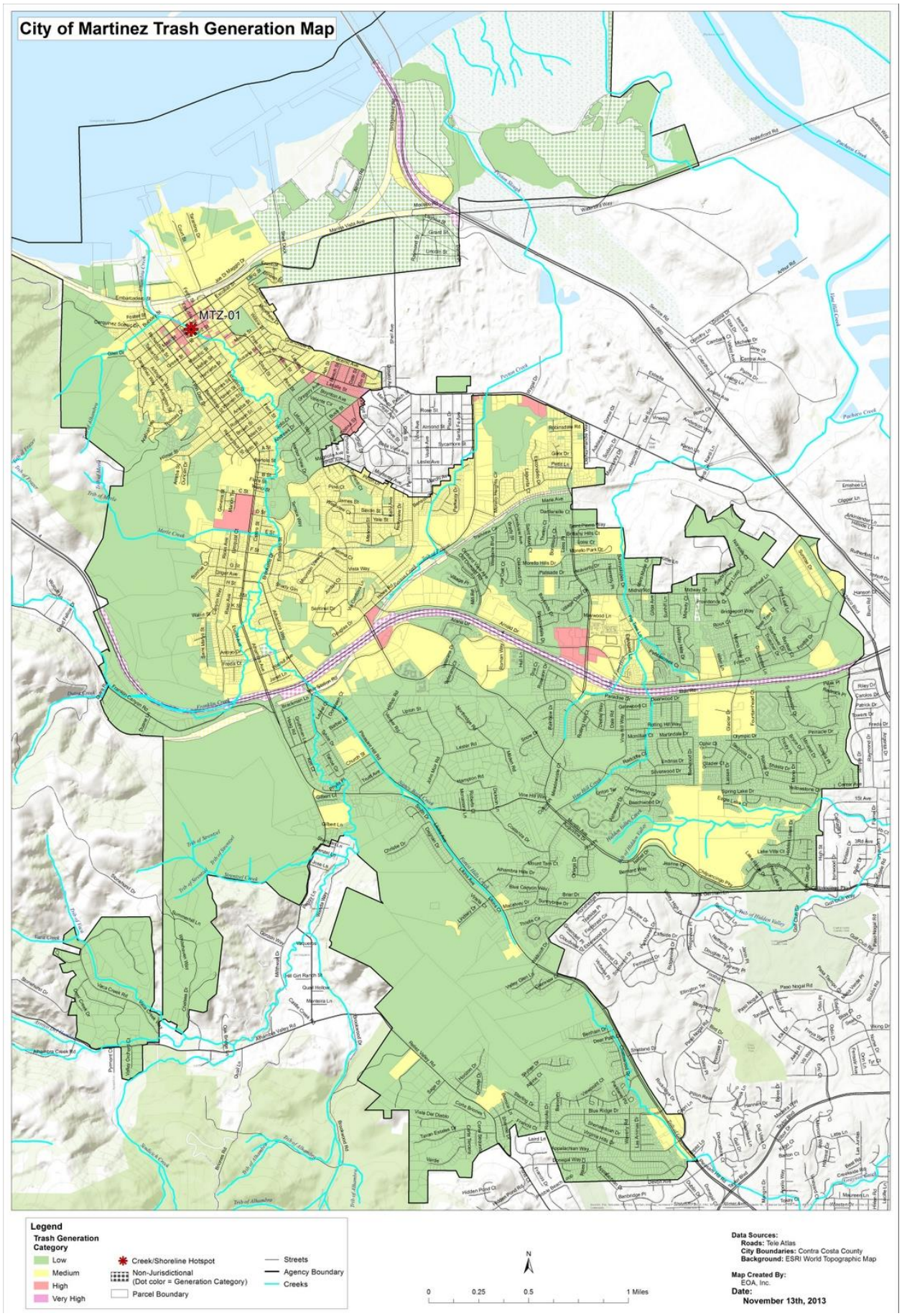
Visual inspections and communication with outside agencies when needed as required to comply with trash reduction.

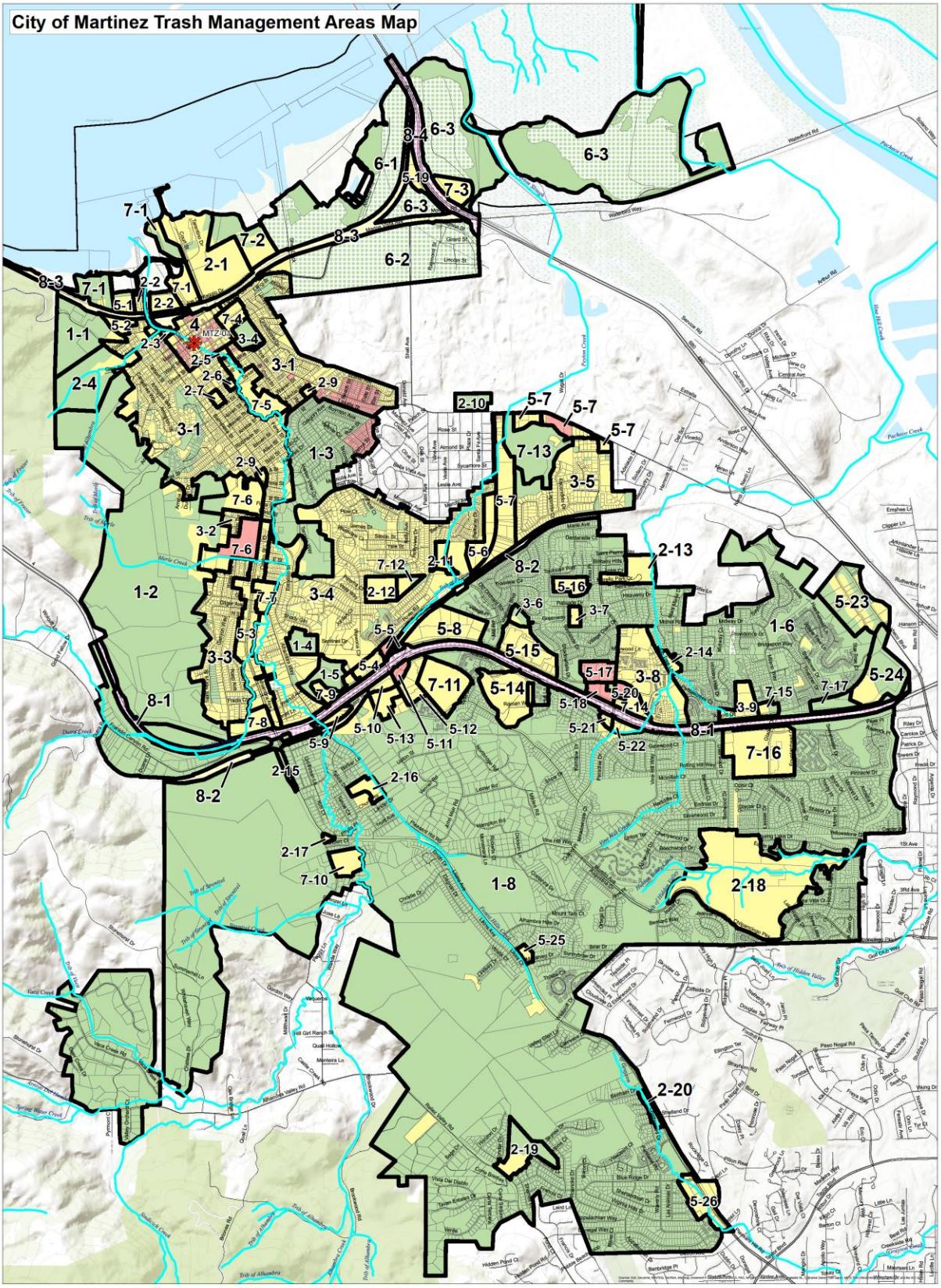
Summary of Control Moeasures and Implementation Schedule for Trash Management Area 8.1 to 8.3

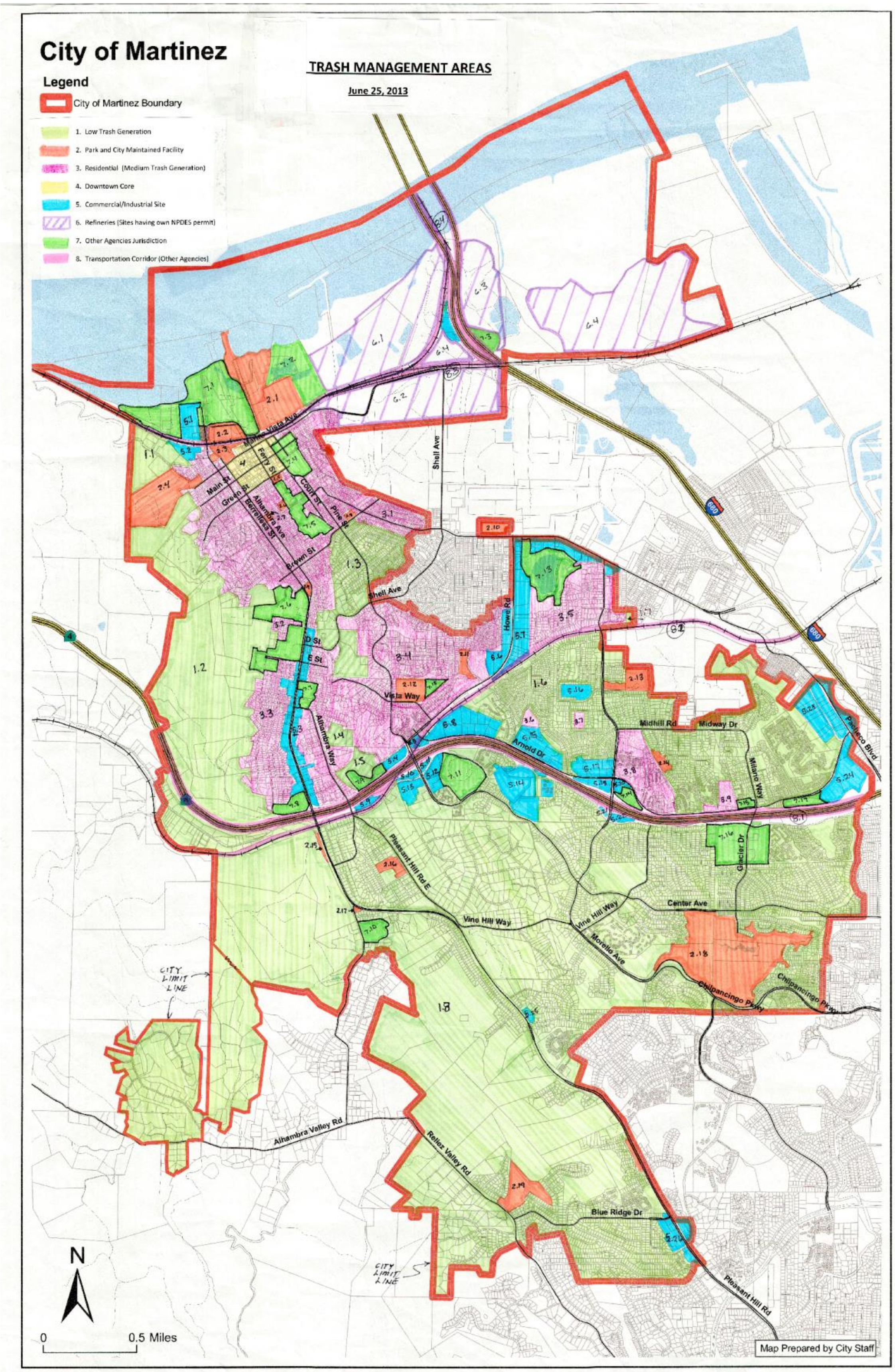
Control Measure	Control Measure Details	Pre- MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
City-Wide Trash Reduction Measures	Refer to above sheet for details of common trash reduction measures.				
Agency cooperation and coordination involving trash management and containment.	communication and coordination with agencies on their compliance with trash reduction methods and principals		**X**	**X**	**X**

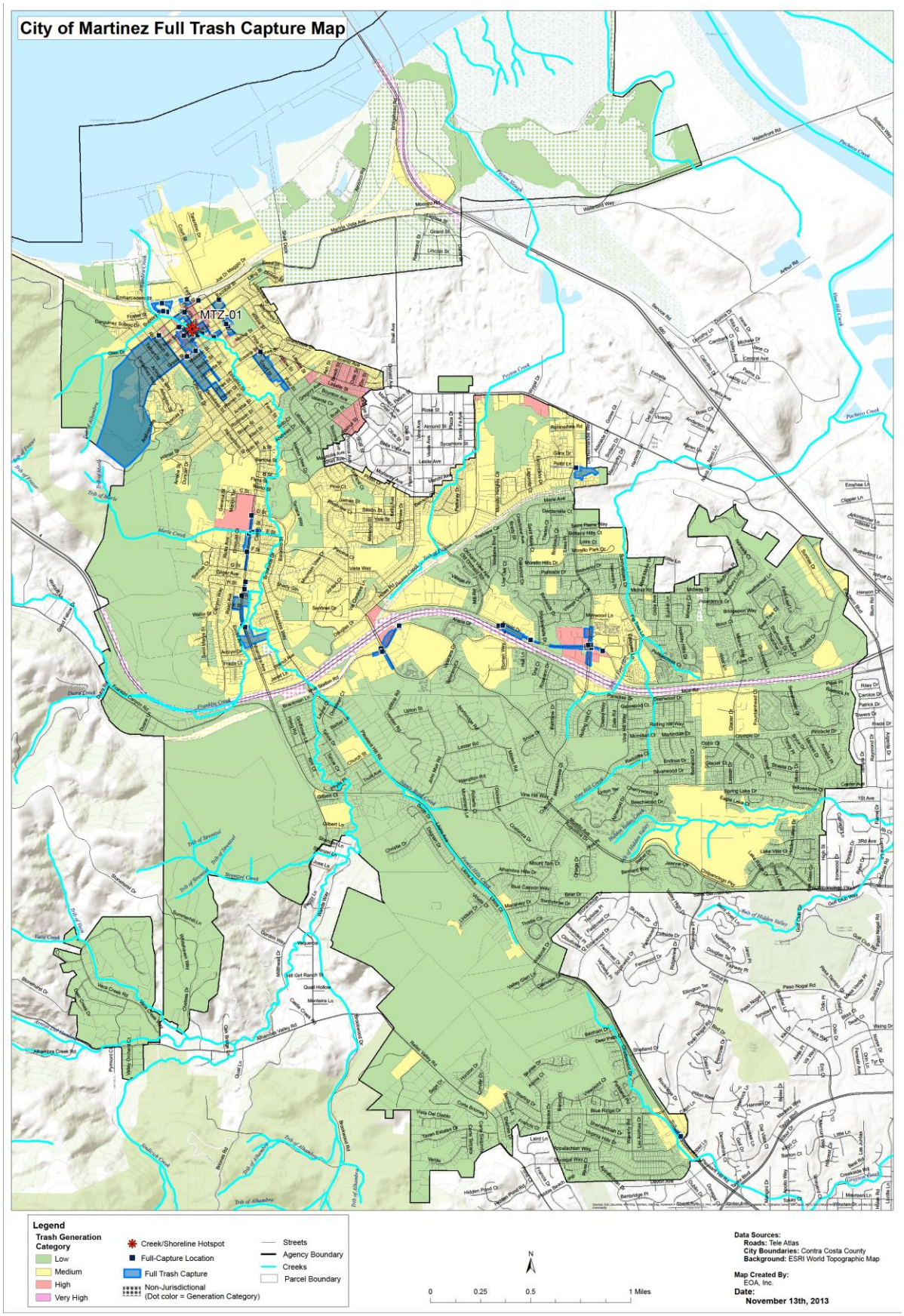
Evaluation of Program Effectiveness for Trash Management Area 8.1-8.3

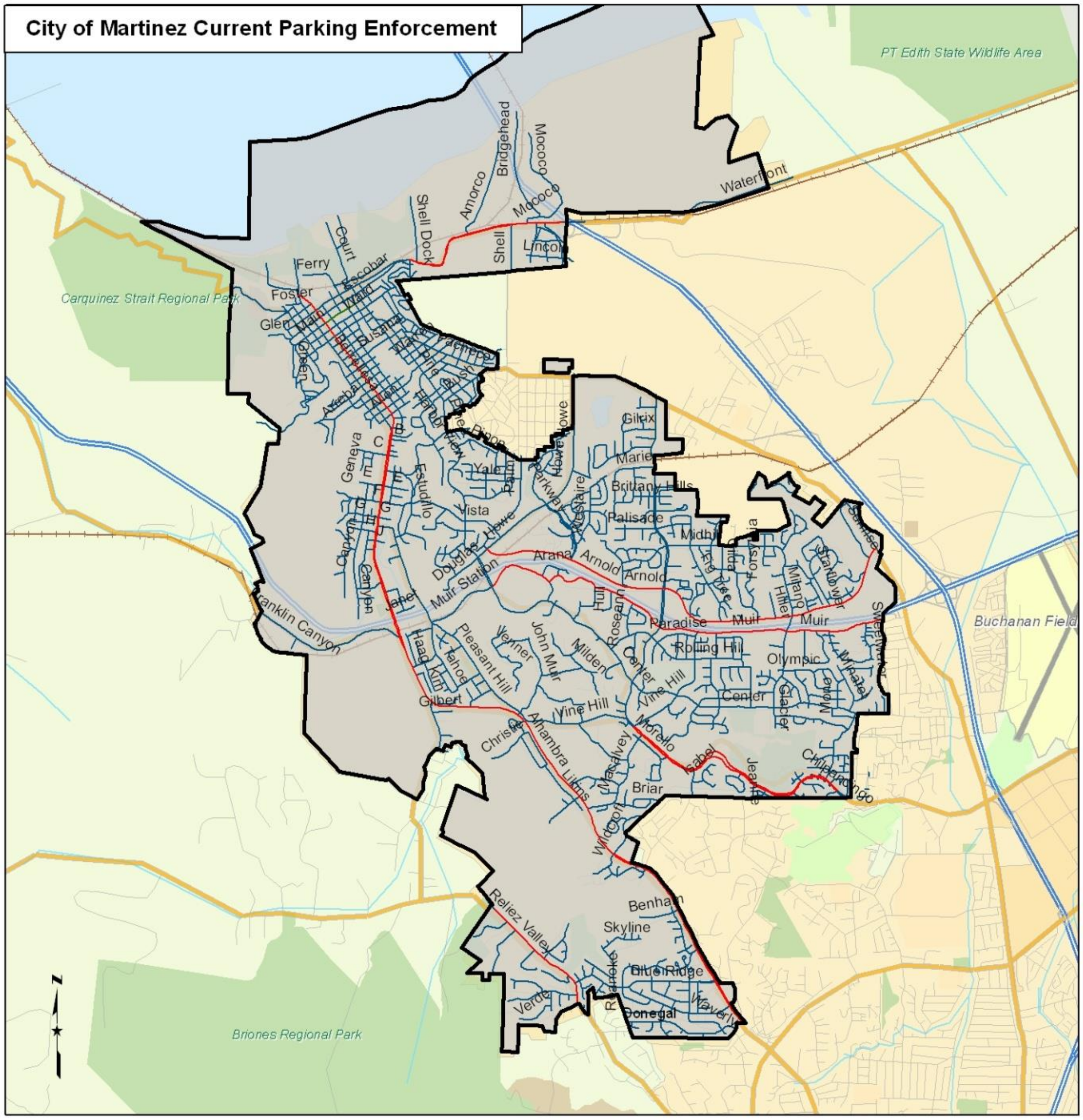
Control Measure	Evaluation Method	Evaluation method details
control measures listed in summary section above	Documentation	Visual inspections, communication and coordination,


City of Martinez Trash Generation Map
MTZ-01
Legend
Trash Generation Category
Low
Medium
High
Very High
Creek/Shoreline Hotspot
Non-Jurisdictional
(Dot color = Generation Category)
Parcel Boundary
Streets
Agency Boundary
Creeks
N
0
0.25
0.5
1 Miles
Data Sources:
Roads: Tele Atlas
City Boundaries: Contra Costa County
Background: ESRI World Topographic Map
Map Created By:
EOA, Inc.
Date:
November 13th, 2013


City of Martinez Trash Management Areas Map
Legend
Trash Generation Category
Low
Medium
High
Very High
Creek/Shoreline Hotspot
Trash Management Area
Non-Jurisdictional (Dot color = Generation Category)
Streets
Agency Boundary
Creeks
Parcel Boundary
N
0
0.25
0.5
1 Miles
Data Sources:
Roads: Tele Atlas
City Boundaries: Contra Costa County
Background: ESRI World Topographic Map
Map Created By:
EOA, Inc.
Date:
November 13th, 2013


City of Martinez
TRASH MANAGEMENT AREAS
June 25, 2013
Legend
City of Martinez Boundary
1. Low Trash Generation
2. Park and City Maintained Facility
3. Residential (Medium Trash Generation)
4. Downtown Core
5. Commercial/Industrial Site
6. Refineries (Sites having own NPDES permit)
7. Other Agencies Jurisdiction
8. Transportation Corridor (Other Agencies)
Shell Ave
Main St
Ferry St
Court St
Green St
Alhambra Ave
Berrellesa St
Pine St
Brown St
Howe Rd
D St
E St
Vista Way
Alhambra Way
Arnold Dr
Midhill Rd
Midway Dr
Pacheco Blvd
Milano Way
Glacier Dr
Pleasant Hill Rd E
Vine Hill Way
Center Ave
Morello Ave
Chilpancingo Pkwy
Alhambra Valley Rd
Reliez Valley Rd
Blue Ridge Dr
Pleasant Hill Rd
CITY LIMIT LINE
N
0
0.5 Miles
Map Prepared by City Staff


City of Martinez Full Trash Capture Map
MTZ-01
Legend
Trash Generation Category
Low
Medium
High
Very High
Creek/Shoreline Hotspot
Full-Capture Location
Full Trash Capture
Non-Jurisdictional (Dot color = Generation Category)
Streets
Agency Boundary
Creeks
Parcel Boundary
N
0
0.25
0.5
1 Miles
Data Sources:
Roads: Tele Atlas
City Boundaries: Contra Costa County
Background: ESRI World Topographic Map
Map Created By:
EOA, Inc.
Date:
November 13th, 2013



Current Parking Enforcement

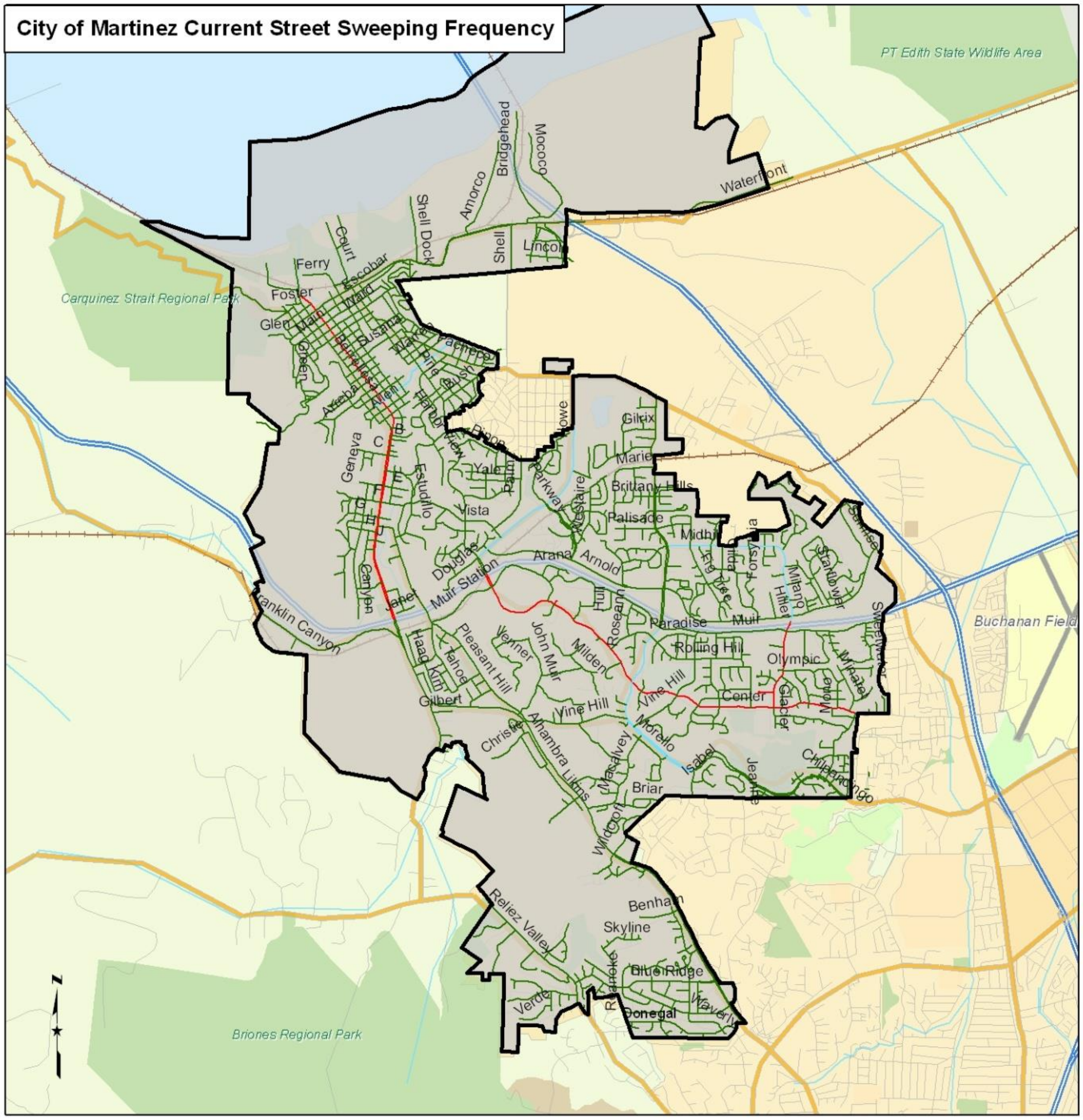
- Not Enforced
- Street Sweeping Signs Posted
- Parking Enforcement Equivalent
- Permittee Boundary

0 1 2 3 Miles

Data Sources:

Streets: Tele Atlas, 2003. Retrieved from http://www.arcgis.com/
City Boundary: County of Contra Costa
Background: ESRI StreetMap USA

Map Created By: EOA, Inc.
Date: January 3, 2012



City of Martinez Current Street Sweeping Frequency

0 | 1 | 2 | 3 Miles

Current Street Sweeping Frequency

- 1x/Week
- 2x/Month
- 1x/Month
- Permittee Boundary

Data Sources:

Streets: Tele Atlas, 2003. Retrieved from http://www.arcgis.com/
City Boundary: County of Contra Costa
Background: ESRI StreetMap USA

Map Created By: EOA, Inc.
Date: January 3, 2012